CLAIMS:

1. A luminance and color separation filter unit (300, 400, 500, 600, 700) for extracting a luminance signal (Y) and two color signals (U, V) from a composite color television signal (CVBS), comprising a chrominance (C) signal being modulated on a sub-carrier which is located in the high-frequency part of the frequency spectrum of the luminance signal (Y), characterized in that the filter unit (300, 400, 500, 600, 700) is arranged to compute at least one value of a set of values comprising an output luminance value ($Y(\vec{x}, n)$) of a particular output pixel ($\vec{x}$), a first color value ($U(\vec{x}, n)$) of the particular output pixel ($\vec{x}$) and a second color value ($V(\vec{x}, n)$) of the particular output pixel ($\vec{x}$) on basis of a first (F_1), a second (F_2) and a third (F_3) sample derived from the composite color television signal (CVBS), where the first (F_1), the second (F_2) and the third (F_3) sample have mutually different sub-carrier phases.

2. A luminance and color separation filter unit (400) as claimed in claim 1, characterized in that the filter unit (400) comprises a sample acquisition unit (302) to acquire the first (F_1), the second (F_2) and the third (F_3) sample from three portions of the composite color television signal, the three portions corresponding to three successive images, the sample acquisition unit (302) being controlled by a motion estimator (402) for computing motion vectors, representing motion between parts of the three successive images.

3. A luminance and color separation filter unit (500) as claimed in claim 1, characterized in that the filter unit (500) comprises a sample acquisition unit (302) to acquire the first (F_1), the second (F_2) and the third (F_3) sample from three portions of the composite color television signal, the three portions corresponding to a single image, the sample acquisition unit (302) being controlled by means for estimating an edge orientation (502) in the single image.

4. A luminance and color separation filter unit (600) as claimed in claim 1, characterized in comprising:

- a first low pass filter (602) for filtering a first (U) one of the two color signals;

- a second low pass filter (604) for filtering a second (V) one of the two color signals;

- a modulator (606) connected to the first low pass filter (602) and the second low pass filter (604), for re-modulating the filtered first (U_{LPF}) one of the two color signals and the filtered second (V_{LPF}) one of the two color signals; and

- a subtraction unit (608) for subtracting the output of the modulator (606) from the composite color television signal (CVBS).

5. A luminance and color separation filter unit (700) as claimed in claim 1, characterized in comprising a spatial up-conversion unit (702) for computing the first (F_1), the second (F_2) and the third (F_3) sample on basis of interpolation of samples extracted from the composite color television signal.

6. An image processing apparatus (800) comprising:

- receiving means (802) for receiving a composite color television signal, comprising a chrominance signal being modulated on a sub-carrier which is located in the high-frequency part of the frequency spectrum of a luminance signal; and

- a luminance and color separation filter unit (300, 400, 500, 600, 700) for extracting the luminance signal and two color signals from the composite color television signal, characterized in that the filter unit (300, 400, 500, 600, 700) is arranged to compute at least one value of a set of values comprising an output luminance value of a particular output pixel, a first color value of the particular output pixel and a second color value of the particular output pixel on basis of a first, a second and a third sample derived from the composite color television signal, where the first, the second and the third sample have mutually different sub-carrier phases.

7. An image processing apparatus (800) as claimed in claim 6, further comprising a display device (804) for displaying images being represented by the luminance signal and the two color signals.

8. An image processing apparatus (800) as claimed in claim 7, characterized in that it is a TV.

9. A method of extracting a luminance signal and two color signals from a composite color television signal, comprising a chrominance signal being modulated on a sub-carrier which is located in the high-frequency part of the frequency spectrum of the luminance signal, characterized in computing at least one value of a set of values comprising an output luminance value of a particular output pixel, a first color value of the particular output pixel and a second color value of the particular output pixel on basis of a first, a second and a third sample derived from the composite color television signal, where the first, the second and the third sample have mutually different sub-carrier phases.

10. A computer program product to be loaded by a computer arrangement, comprising instructions to extract a luminance signal and two color signals from a composite color television signal, comprising a chrominance signal being modulated on a sub-carrier which is located in the high-frequency part of the frequency spectrum of the luminance signal, the computer arrangement comprising processing means and a memory, the computer program product, after being loaded, providing said processing means with the capability to carry out: computing at least one value of a set of values comprising an output luminance value of a particular output pixel, a first color value of the particular output pixel and a second color value of the particular output pixel on basis of a first, a second and a third sample derived from the composite color television signal, where the first, the second and the third sample have mutually different sub-carrier phases.